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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,933	07/09/2001	Patrick Foster	335.6214USV	8565

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EXAMINER

THORNTON, YVETTE C

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/901,933

Applicant(s)

FOSTER ET AL.

Examiner

Yvette C. Thornton

Art Unit

1752

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see continuation sheet.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: 34-48.Claim(s) objected to: 18-20, 23, 24, 29 and 31.Claim(s) rejected: 14-17, 21, 22, 27, 28 and 30-33.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☐ Other: \_\_\_\_\_

In regard to the rejection of claims 14-17, 27-28 and 33 over Pavelchek in view of Bailey, applicants continue to argue that the one of ordinary skill in the art would not have been motivated to combine the teachings of the two said references because Bailey pertains to a wavelength exposure of 365-436 nm while Pavelchek uses 193 nm exposure. The examiner maintains the position that while Bailey teaches that the taught composition is particularly useful in conjunction with exposure sources emitting from 250 nm to 450 nm (c. 6, l. 10-15), it does not teach away from using lower wavelength exposure. One of ordinary skill in the art would have a reasonable expectation of success with the expectation that a lower wavelength would not give enhanced results. Furthermore, Pavelchek teaches that the taught resist layer is imaged with activating radiation through a mask in conventional manner (c. 15, l. 3-4). One of ordinary skill in the art would have been motivated to use any wavelength of exposure. Furthermore, there is no evidence that the taught invention of Bailey is not sensitive at 193 nm.

Applicants further argue that the composition of Bailey is not chemically amplified as required by the instant claims. The examiner maintains the position that the silicon containing moiety of the taught polymer is readily acid labile thereby meeting the limitation of being chemically amplified. This position is supported by the teaching of Allen et al. (US 5985524 A) which discloses that suitable acid cleavable groups include silyl, C1-6 alkyl silylethoxy, (C1-6 alkyl silyl) silylethoxy and the like. In one embodiment, the acid cleavable group is attached to the carbonyl of the acrylate or methacrylate (c. 2, l. 33-64).


Applicants also argue that the prior art reference to Pavelchek fails to teach and/or suggest a thermal acid generator as set forth in instant claim 28. The examiner respectfully disagrees. While Pavelchek fails to exemplify the use of the said thermal acid generator it does teach that a variety of known thermal acid generators are suitably employed such as 2,4,4,6-tetrabromocyclohexadienone, benzoin tosylate, 4-nitrobenzyl tosylate and other alkylesters of organic sulfonic acids (c. 9, l. 12-67). It is the examiner's position that benzoin tosylate and 4-nitrobenzyl tosylate meets the limitations of instant claims 16. One of ordinary skill in the art would have been motivated to use any of the taught thermal acid generators in an antireflective composition such as that exemplified in example 5.

In regard to the rejection of claims 14-16, 21-22, 27-28 and 30-33 over Thackeray in view of Bailey, applicants present arguments similar to those presented in regard to the combination of Pavelchek and Bailey. The examiner maintains the position discussed above, that the silicon containing moiety of Bailey is readily acid labile thereby meeting the limitations of being chemically amplified. See Allen et al. (US 5985524 A c. 2, l. 33-64). Applicants also argue that Thackeray fails to teach the use of a thermal acid generator as set forth in instant claim 28. Thackeray teaches that a variety of known thermal acid generators are suitably employed such as 2,4,4,6-tetrabromocyclohexadienone, benzoin tosylate, 2-nitrobenzyl tosylate and other alkylesters of organic sulfonic acids (c. 6, l. 11-40). It is the examiner's position that benzoin tosylate and 2-nitrobenzyl tosylate meets the limitations of instant claims 16. One of ordinary skill in the art would have been motivated to use any of the taught thermal acid generator in the taught composition of Thackeray.

The examiner maintains the rejections of record as set forth in the previous office action.

The examiner can be reached Monday-Thursday from 8:00 am to 6:30 pm at 703-305-0589.

yct  
October 20, 2003

  
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